

# MITSUBISHI

## CL2X16-D1MJ1V

### CC-Link/LT Remote I/O Module

Thank you very much for purchasing this product.

Please read this manual thoroughly before starting to use the product and handle the product properly.

## User's Manual

**CC-Link/LT**

MODEL	CL2X16-D1MJ1V-U
MODEL Number	13JY39
IB(NA)-0800392-A(0708)MEE	

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#### SAFETY PRECAUTIONS

(Read these precautions before using.)

Please read this manual carefully and pay special attention to safety in order to handle this product properly. Also pay careful attention to safety and handle the module properly. These precautions apply only to Mitsubishi equipment. Refer to the user's manual of the CPU module to use for a description of the PLC system safety precautions. These **SAFETY PRECAUTIONS** classify the safety precautions into two categories: "DANGER" and "CAUTION".



Procedures which may lead to a dangerous condition and cause death or serious injury if not carried out properly.



Procedures which may lead to a dangerous condition and cause superficial to medium injury, or physical damage only, if not carried out properly.

Depending on circumstances, procedures indicated by **CAUTION** may also be linked to serious results. In any case, it is important to follow the directions for usage. Store this manual in a safe place so that you can take it out and read it whenever necessary. Always forward it to the end user.

#### DESIGN PRECAUTIONS



Configure an interlock circuit in a sequence program so that the system operates on the safety side using the communication status information in the event the data link fails into a communication problem. Otherwise, erroneous output and malfunction may result in accidents. Input could be switched on or off when a problem occurs in the remote I/O modules. So build an external monitoring circuit that will monitor any input signals that could cause a serious accident.



Do not have control cables and communication cables bundled with or placed near by the main circuit and/or power cables. Wire those cables at least 100mm(3.94 inch) away from the main circuit and/or power cables. It may cause malfunction due to noise interference.

#### INSTALLATION PRECAUTIONS



Use the module in an environment that meets the general specifications contained in this manual. Using this module in an environment outside the range of the general specifications could result in electric shock, fire, erroneous operation, and damage to or deterioration of the product. Do not directly touch the module's conductive parts. Doing so could cause malfunction or trouble in the module. Securely fix the module in place using the DIN rail. If the module is not securely fixed, it may fall off or cause malfunction.

#### WIRING PRECAUTIONS



Completely turn off the externally supplied power used in the system when installing or placing wiring. Not completely turning off all power could result in electric shock or damage to the product.



Wire the module correctly upon verifying the product's rated voltage and the connector pin arrangement. Connecting to a power supply different from rating or miss-wiring may cause fire and/or product failure. Make sure foreign objects do not get inside the module, such as dirt and wire chips. It may cause fire, product failure or malfunction.

#### STARTING AND MAINTENANCE PRECAUTIONS



Switch off all phases of the externally supplied power used in the system when cleaning the module or retightening the terminal or module mounting screws. Not doing so could result in electric shock.



Do not disassemble or modify the module. Doing so may cause failure, malfunction, injury, or fire. The module case is made of resin; do not drop it or subject it to strong shock. A module damage may result. Completely turn off the externally supplied power used in the system before mounting or removing the module. Not doing so could result in damage to the product. Before touching the module, always touch grounded metal, etc. to discharge static electricity from the human body, etc. Not doing so can cause the module to fail or malfunction.

#### DISPOSAL PRECAUTIONS



When disposing of this product, treat it as industrial waste.

## 1. Overview

This user's manual explains specifications and names of individual parts of the CL2X16-D1MJ1V type CC-Link/LT remote I/O module (hereinafter abbreviated as remote I/O module).

## 2. Specifications

### 2.1 General Specifications

The general specifications for the remote I/O module are shown in the following table.

Item	Specifications				
Operating ambient temperature	0 to 55 °C				
Storage ambient temperature	-25 to 75 °C				
Operating ambient humidity	5 to 95%RH, non-condensing				
Storage ambient humidity	5 to 95%RH, non-condensing				
Vibration resistance	Conforming to JIS B 3502, IEC 61131-2	Frequency Under intermittent vibration Under continuous vibration	10 to 57Hz 57 to 150Hz 10 to 57Hz 57 to 150Hz	Acceleration 9.8m/s <sup>2</sup> 0.035mm (0.01in.) 4.9m/s <sup>2</sup>	Amplitude 0.075mm (0.003in.) 10 times each in X, Y, Z directions (for 80 min.)
Shock resistance	Conforming to JIS B 3502, IEC 61131-2 (147 m/s <sup>2</sup> , 3 times in each of 3 directions X, Y, Z)				
Operating ambience	No corrosive gases				
Operating altitude <sup>3</sup>	2000m (6562ft) max.				
Installation location	Inside control panel				
Overvoltage category <sup>4</sup>	II max.				
Pollution level <sup>5</sup>	2 max.				

<sup>1</sup>: This indicates the section of the power supply to which the equipment is assumed to be connected between the public electrical power distribution network and the machinery within premises. Category II applies to equipment for which electrical power is supplied from fixed facilities. The surge voltage withstand level for up to the rated voltage of 300 V is 2500 V.

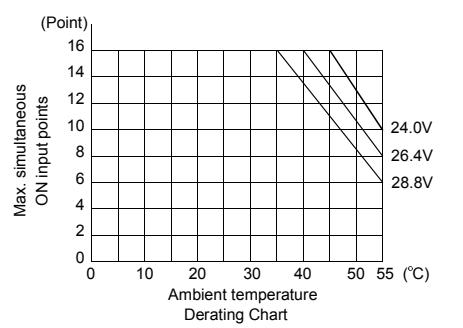
<sup>2</sup>: This index indicates the degree to which conductive material is generated in terms of the environment in which the equipment is used. Pollution level 2 is when only non-conductive pollution occurs. A temporary conductivity caused by condensing must be expected occasionally.

<sup>3</sup>: Do not use or store the PLC under pressure higher than the atmospheric pressure of altitude 0m. Doing so can cause a malfunction. When using the PLC under pressure, please contact your sales representative.

### 2.2 Performance specifications

The performance specifications for the remote I/O module are shown in the following table.

Type		CL2X16-D1MJ1V	
Number of inputs		16 points	
Isolation method		Photocoupler isolation	
Rated input voltage		24V DC (Common with the module power supply)	
Rated input current		Approx. 4mA	
Operating voltage range		Common with the module power supply	
Input derating		Refer to the derating chart.	
ON voltage/ON current		19V or higher/3mA or higher	
OFF voltage/OFF current		11V or lower/1.7mA or lower	
Input resistance		5.6kΩ	
Response time	Response time setting	0.5ms (High speed response type)	1.5ms (Standard type)
	TYP.	0.05ms	—
	MAX.	0.1ms	1.5ms
	TYP.	0.2ms	—
	MAX.	0.5ms	1.5ms
	Common wiring method	16 points/1 common (2 points) (MIL connector 1-wire type)	
Input method		Positive common	
Number of stations occupied		In 4-point mode: Occupies 4 stations. In 8-point mode: Occupies 2 stations. In 16-point mode: Occupies 1 station	
Maximum allowable current for I/O power supply		1.0A or lower/common	
Module power	Voltage	20.4 to 28.8V DC (ripple ratio: within 5%)	
Current consumption	45mA or lower (When 24V DC and all points on)	45mA or lower (When 24V DC and all points on)	
	Current on startup	70mA or lower (24V DC)	
Noise durability		DC type noise voltage 500V-p, noise width 1μs, noise carrier frequency 25 to 60Hz (noise simulator condition) First transient/noise burst IEC 61000-4-4: 2kV	
Withstand voltage		500V AC for 1 minute between primary (external DC terminal) and secondary (internal circuit)	
Insulation resistance		10MΩ or more between primary (external DC terminal) and secondary (internal circuit) when measured with a 500V DC insulation resistance tester	
Protection class		IP2X	
Weight		0.05kg	
I/O part connection method		20 pin MIL connector	
Module installation method		DIN rail installation, Can be installed in six directions	



## 3. Part Names

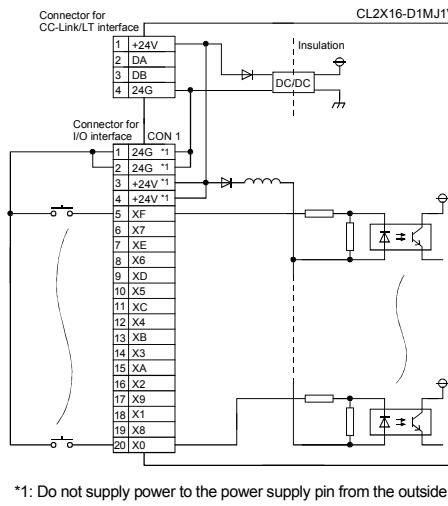
This section explains the names of the components for the remote I/O module.

Connector for I/O interface	Pin No.	Signal name	Pin No.	Signal name
CON1-20	X0	CON1-19	X8	
CON1-18	X1	CON1-17	X9	
CON1-16	X2	CON1-15	XA	
CON1-14	X3	CON1-13	XB	
CON1-12	X4	CON1-11	XC	
CON1-10	X5	CON1-9	XD	
CON1-8	X6	CON1-7	XE	
CON1-6	X7	CON1-5	XF	
CON1-4	+24V*1	CON1-3	+24V*1	
CON1-2	24G*1	CON1-1	24G*1	

Connector for CC-Link/LT interface	Pin No.	Signal name
LINKP/N	1	+24V
	2	DA
	3	DB
	4	24G

## 5. Wiring



\*1: Do not supply power to the power supply pin from the outside.

## 6. External Dimensions

